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ABSTRACT

The nature of self-report instruments designed to measure communication apprehension is discussed in this study. The following proposition was investigated: there are independent source versus receiver dimensions and independent-formal versus informal-context dimensions of self-reported communication apprehension. The Personal Report of Communication Apprehension and a 45-item instrument focusing on apprehension in the reception of communication were given to 324 undergraduate college students. The results indicated that a separate dimension or type of communication apprehension exists for the receiving function of communication. Both a factor analysis and a correlational analysis indicated that self-reported receiver apprehension varies independently of self-reported apprehension experienced by sources of communication. (WR)

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AN INVESTIGATION OF RECEIVER APPREHENSION AND SOCIAL CONTEXT DIMENSIONS OF COMMUNICATION APPREHENSION

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ABSTRACT

This study discussed the nature of self-report instruments designed to measure communication apprehension and investigated the following proposition: There are independent source versus receiver dimensions and independent formal- versus informal-context dimensions of self-reported communication apprehension. The Personal Report of Communication Apprehension (PRCA) and a forty-five item instrument focusing on apprehension in the reception of communication were given to 324 students. Factor analyses and Pearson product-moment correlations revealed two independent factors related to source versus receiver apprehension. No dimensions of communication apprehension related to social contexts (formal versus informal) were discovered. An initial twenty item self-report instrument labelled the Receiver Apprehension Test (RAT) was developed.

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AN INVESTIGATION OF RECEIVER APPREHENSION AND SOCIAL CONTEXT DIMENSIONS OF COMMUNICATION APPREHENSION

This study explored the dimensionality of communication apprehension and attempted to lay the "ground-work" for self-report instruments that could measure that phenomena. As has been noted frequently, the self-report technique has been the prevalent measurement method used in communication apprehension research.[1] There are good reasons for this practice.

Outside of the practical advantages involving expediency of administration and analysis, self-report techniques may indeed have theoretical advantages related to validity of measurement. Most communication apprehension is probably best conceptualized as fear rather than anxiety. Porter stated the assumption well in the rationale of a recent study:

> Although the constitutive definitions of "anxiety" and "fear" as constructs are no mean issues among psychologists and psychiatrists, one aspect is agreed upon rather generally. "Anxiety" refers to psychological/psysiological apprehension which is not rationally understood by the individual in question; whereas, "fear" is characterized by the same apprehension except there is no personality-trait accounting for the disruption, and the individual in question probably understands why he is aroused. . . .Speech "anxiety" is not a pathological phenomenon derived from some personality quirk. The student knows, for example, why he is apprehensive; he is fearful, not anxious in an irrational, personality-trait, or pathological sense.[2]

Research results in the same study appear to confirm this assumption. The point here is that if the person understands that he is apprehensive and why he is apprehensive--fearful--then his own report of his own fear ought to be the most valid. Observer ratings and physiological indices probably do not tap this aspect of communication apprehension as directly. If a person thinks he is afraid, he probably is. The ways a person cognitively processes his own physiological cues probably determine his fear levels rather than the physiological manifestations themselves. To the extent that a person knows why he is apprehensive, his self-report may well be an index of how he has cognitively integrated his past physiological cues and physical behavior under conditions of fear arousing stimuli. Also, this processing may well determine the extent and specific physiological manifestations of future behaviors under similar conditions. This cognitive processing probably mediates potential and actual fear that an individual experiences.

In short, how much fear a person thinks he has, will rather directly affect his verbal (and nonverbal) encoding-decoding capacities

and behavior; encoding and decoding, in turn, appear to be a major concern of communication teachers and researchers. The extent to which an individual will admit such fear is related not only to his fear of "reporting his communication fear,"[3] but also to the nature of the instrument used and to the environment in which such disclosures are sought.

Within the restricted context of communication apprehension as evidenced by self-reports, little investigation into the dimensionality of the construct is available. Friedrich[4] initiated some concern over dimentionality which has been discussed at length and further explored by others such as McCroskey[5] and Porter.[6] However, most self-report instruments used in research have focused exclusively upon the source of communication and his encoding behavior predominantly in the formal, public speaking context.[7] This artifact appears to have precluded investigation of dimensionality issues.

If self-reported, communication apprehension is conceptualized as a multidimensional construct, then the functional role in which an individual's communication behavior occurs ought to have a major impact on that dimensionality. The functions in point are encoding and decoding. The nature of fear involved in sending information is quite different for the apprehension involved in receiving information. The former is probably more related to fear of social disapproval while the latter is probably more related to the fear of misinterpreting, inadequately processing, and/or not being able to adjust psychologically to messages sent by others. Also, the nature of scale items which could tap the apprehension related to source versus a receiver of communication would, of necessity, differ in wording. Although communication scholars have verbalized concern for receiving and processing information (how we spend most of our time), little concern has been evidenced for receiver apprehension which would most directly affect decoding and response tendancies.

Further, the social context in which communication occurs ought to affect the dimensions of self-reported communication apprehension instruments, although the nature of the instruments in use may have precluded this effect. A person's fear of public or formal communication might not vary directly with his fear of interpersonal or informal types of communication. The rationale for recent research by McCroskey has argued against types of communication anxiety related to differing social contexts.[8] However, as a result of a discrepancy between the frequency distribution of a purely public speaking instrument (PRPSA) and the slightly more generalized measure of communication apprehension (PRCA), McCroskey explained that "public speaking produces more anxiety than other communication transactions."[9] At this point the assumed linear relationship between "public speaking apprehension" and apprehension in other contexts might also be questioned. The correlation of PRPSA and PRCA was able to account for

only 17 per cent common variance (r=.41), although both were highly reliable instruments.[10] Also, unpublished research by Wheeless and Crouse[11] lends support to the multidimensionality of communication apprehension related to social contexts. A thirty-item instrument (predecessor of the 20-item PRCA) was used to measure communication apprehension among students in three Illinois nursing schools. Twenty-two items of the instrument loaded on two separate "public speaking" and "interpersonal communication" apprehension dimensions in the factor analysis performed. This instrument contained more items clearly related to interpersonal contexts than the current PRCA.

Phillips' definition of the reticent individual implies a summary of the dimensionality issue: "A person for whom 'anxiety' (quotes mine) about participation in oral communication outweighs his projection of gain from the situation (italics mine)."[12] Situations vary. They appear to vary depending upon whether one is a source or a receiver in formal or informal communication contexts. Therefore, the proposition that there are independent source versus receiver dimensions and independent formal- versus informal-context dimensions of self-reported communication apprehension was investigated. This study also explored the nature of initial instruments needed to tap these dimensions.

Method and Analysis

The population employed in this study consisted of students enrolled in the lower division interpersonal communication course at West Virginia University. During the first and second week of class, students were tested in the small sections of the course with the current twenty-item (Likert-type) Personal Report of Communication Apprehension (PRCA).[13] Shortly after mid semester students were administered a 45-item self-report instrument designed to test receiver apprehension. These Likert-type items were developed by consulting the PRCS,[14] the PRCA, the Test Anxiety Inventory,[15] and Spielbergers anxiety tests.[16] In some cases items from these instruments were reworded to reflect a receiver orientation and a communication apprehension orientation. In other instances, terminology supplied by these tests were used in the creation of totally new items. The constructs of fear and anxiety were studied carefully for the development of items that would have content as well as face validity (see Appendix) for receiver apprehension. No program for the treatment of communication apprehension was operative in the course. Students who had been present to take both tests were used in the analysis. This resulted in an N of 324, of which 35 per cent were male and 65 per cent were female (The McCroskey research previously cited indicated that women generally score several points higher than males on the PRCA).

The resulting data from these two tests were submitted to principle components factor analysis which included orthogonal, varimax rotation. The tests were analyzed separately and analyzed together in a single factor analysis. Initial cut-off criterion for the extraction of additional factors was set at an eigenvalue of 1.0. Criteria for determination of the factor structure was (1) a modification of the Scree procedure recommended by Cattell, (2) the requirement that at least three items must be loaded on a factor at .60 or above with no secondary loading above .40, (3) the requirement that remaining items have their highest loading on a factor at minimally twice that of any secondary loading on another factor. In addition to the factor analytic test of independent dimensions with orthogonal rotation, Pearson product-moment correlations requiring an .05 level of significance were run between resulting factors to test for the strength of the relationship between them. Low correlations, of course, were expected if the factors were independent. Normative data were also obtained for description of the resulting instruments.

Application of the above criteria to the separate analysis of the PRCA produced a two-factor solution upon which all items loaded satisfactorily. However, examination of the resulting factors revealed that the first factor consisted of negatively worded items and the second factor consisted of positively worded items. Subsequent examination of the unrotated factor matrix revealed all items had their highest loading on the first factor. Therefore, the instrument was considered to be unidimensional. Split-half correlation produced a corrected reliability estimate of .90 for PRCA. The mean was 61.52; and the standard deviation was 11.82 within a normal frequency distribution. (These norms are very similar to those obtained by McCroskey: mean, 60.45; standard deviation, 11.58; normally distributed.) Twelve per cent of the subjects were classified beyond a standard deviation above the mean.

Factor analysis of the 45-items related to receiver apprehension produced an eleven factor solution through application of the "eigenvalue of 1.0" criterion alone. However, application of the Scree procedure and the requirement of three items loaded at .60 or above on each factor resulted in a single factor solution. (Although there may have been other potential factors, the number of loaded items representing those factors were insufficient to produce clear dimensions.) The unrotated factor matrix was examined and the twenty items with their highest loading on the factor were selected as a Receiver Apprehension Test (RAT). Loadings ranged from .51 to .73. A Split-half correlation of these items produced a corrected reliability estimate of .91. The mean was 46.93 and the standard deviation was 12.67 within a positively skewed distribution. Ten percent of the subjects were classified beyond a standard deviation above the mean.

Application of the criteria to the combined factor analysis of the twenty-item PRCA and the twenty-item RAT produced a two-factor solution. According to the apriori criteria all RAT items loaded on the first factor and all PRCA items loaded on the second factor during the orthogonal rotation. Factor loadings for the RAT ranged from .50 to .74. Factor loadings for the PRCA ranged from .29 to .70 (See rotated factor matrix.). Pearson product-moment correlation between the RAT and PRCA produced a low, but significant correlation coefficient of .20. The two tests accounted for only 4 per cent common variance.

DISCUSSION

This study fairly well substantiated that a separate dimension or type of communication apprehension exists for the receiving function of communication. Both the factor analysis and the correlational analysis indicates that self-reported receiver apprehension (RAT) varies independently of self-reported apprehension experienced by sources (PRCA) of communication. Examination of the resulting items included in the Receiver Apprehension Test (RAT) indicates that this construct does in part deal with inadequate processing of information and, perhaps, adjusting psychologically to messages sent by others. However, since the absolute neutral point of the RAT was 60 and the mean was 47, it appears that most of the subjects in the study experienced significantly lower apprehension as receivers than as sources. The mean on the PRCA was 62 with an absolute neutral of 60. This result is not surprising. We would probably expect persons to be much less apprehensive generally about receiving information than about functioning as a communication source. However, on the basis of the two tests a fairly substantial number of subjects could be classified as high apprehensives. Twelve per cent on the PRCA and ten per cent on the RAT were beyond a standard deviation above the mean. Also, the PRCA is more heavily weighted toward formal public speaking items while the RAT is more heavily weighted toward interpersonal communication items. This characteristic could partially account for the descrepancy in mean scores and perhaps the factor structures.

No other dimensions involving formal versus informal communication apprehension contexts were observed. Indeed, RAT and PRCA both appeared to be unidimensional constructs with items related to both informal-interpersonal and formal-public communication contexts represented in both. However, some caution should be noted against premature closure on this issue. Perhaps the nature of the items included or not included, in addition to their particular order, precluded discovery of other dimensions capable of meeting the rather conservative criteria utilized in this study. While the separation of time in the administration of PRCA and RAT may have facilitated the discovery of separate dimensions for those two

instruments, that time lag may have also facilitated a response set precluding the discovery of other factors. Carefully planned items designed to tap formal versus informal dimensions of communication apprehension need to be included with these tests in future examination of this particular issue of dimensionality.

Also as a result of this study, an initial instrument for the measurement and study of receiver apprehension has been developed. Again, some caution should be expressed about its structure since it was developed out of a larger instrument containing more than twice as many items. Independent testing of the twenty-item instrument alone and in conjunction with other tests of communication apprehension is needed for complete confidence in the stability of its items and structure.

References

[1]Theodore Clevenger, "A Synthesis of Experimental Research in Stage Fright," QJS, 45 (1959), 134-145; William W. Hamilton, "A Review of Experimental Studies on Stage Fright," Pennsylvania Speech Annual, 17 (1960), 41-48; James C. McCroskey, "Measures of Communication Bound Anxiety," SM, 37 (1970), 269-277; D. Thomas Porter, "Self-Report Scales of Communication Apprehension and Autonomic Arousal: A Test of Construct Validity," paper presented at the Speech Communication Association Convention, New York, N. Y., November, 1973. These articles provide summaries of differing types of instruments used.

[2]Porter, p. 3.

[3]Porter, p. 1. Porter appears to think that this fear of reporting a fear may be a threat to the self-concept of many individuals and, therefore, may interfere with adequate measurement. On the other hand he argues that communication fear exists among normal, healthy individuals--as opposed to those with a pathological personaltiy-trait. If the prevalence of communication apprehension is as high as we are led to believe by past surveys, then admission of the fear is probably socially acceptable and disclosure of that fear would probably constitute little additional threat to self concept. The fear of communication itself is probably the greater threat to self concept, not the disclosure of it. Note the number of sepakers, entertainers, and students whom you can recall who have freely admitted speech fright. These admissions, especially by students, probably generated the concern by teachers and researchers which provided the impetus for research in communication apprehension in the first place.

[4]Gustav W. Friedrich, "An Empirical Explication of a Concept of Self-Reported Speech Anxiety," SM, 37 (1970), 67-72.

[5]McCroskey.

[6]Porter.

[7]See scales employed by McCroskey; Porter; Friedrich; Howard Gilkinson, "Social Fears as Reported by Students in College Speech Classes," SM, 9 (1942), 141-160; Gordon L. Paul, Insight Versus Desensitization in Psychotherapy (Stanford: Stanford University Press, 1966); O. Kondas, "Reduction of Examination Anxiety and 'Stage Fright' by Group Desensitization and Relaxation," Behavior Research and Therapy, 5 (1967), 275-281; James C. McCroskey, David C. Ralph, and James E. Barrick, "The Effect of Systematic Desensitization on Speech Anxiety," ST, 19 (1970), 32-36.

[8]McCroskey states that "the work of Phillips suggests a broadly based anxiety related to oral communication rather than to a variety of 'types' of communication bound anxiety," p. 270.

[9]McCroskey, p. 277.

[10]McCroskey, p. 270.

[11]Lawrence R. Wheeless and Wanda Crouse, "The Nature and Measurement of Communication Apprehension among Student Nurses," unpublished research report, West Virginia University, Morgantown, W.V., 1973.

[12]Gerald M. Phillips, "Reticence: Pathology of the Normal Speaker," SM, 35 (1968), 39-49.

[13]McCroskey.

[14]Gilkinson.

[15]J. R. Emery and J. D. Kumboltz, "Standard Versus Individualized Hierarchies in Desensitization to Reduce Test Anxiety," Journal of Counseling Psychology, 14 (1967), 204-209.

[16]C. D. Spielberger, Anxiety and Behavior (New York: Academic Press, 1966): C. D. Spielberger and R. E. Luschene, "Theory and Measurement of Anxiety States," in R. B. Cattell, Modern Personality (Chicago: Adelene Press, 1970).

TABLE 1

ROTATED FACTOR MATRIX OF RAT AND PRCA ITEMS

Item number keyed with tests in appendix	Factor I RAT	Factor II PRCA
Item 1	.14	.47
Item 2	.02	.57
Item 3	.00	.52
Item 4	.03	.65
Item 5	.03	.29
Item 6	.20	.44
Item 7	.18	.50
Item 8	.11	.70
Item 9	.05	.57
Item 10	.05	.70
Item 11	.03	.52
Item 12	.14	.69
Item 13	.17	.60
Item 14	.07	.60
Item 15	.15	.44
Item 16	.07	.48
Item 17	.01	.62
Item 18	.13	.49
Item 19	.09	.62
Item 20	.00	.59
Item 1	.58	.07
Item 2	.53	.17
Item 3	.52	.04
Item 4	.64	.12
Item 5	.55	.07
Item 6	.67	.07
Item 7	.63	.10
Item 8	.70	.08
Item 9	.57	.17
Item 10	.69	.13
Item 11	.60	.06
Item 12	.62	.07
Item 13	.56	.05
Item 14	.68	.04
Item 15	.70	.09
Item 16	.54	.13
Item 17	.50	.19
Item 18	.74	.07
Item 19	.65	.12
Item 20	.62	.07

Factor	Variance	Percent of Total Variance
Factor I	7.87	54.63
Factor II	6.54	45.37

APPENDIX
SOURCE AND RECEIVER TESTS OF COMMUNICATION APPREHENSION

RECEIVER APPREHENSION TEST (RAT)

The following statements apply to how various people feel about receiving communication. Indicate if these statements apply to how you feel by noting whether you (5) strongly agree, (4) agree, (3) are undecided, (2) disagree, or (1) strongly disagree.

1. I feel comfortable when listening to others on the phone.
2. It is often difficult for me to concentrate on what others are saying.
3. When listening to members of the opposite sex I find it easy to concentrate on what is being said.
4. I have no fear of being a listener as a member of an audience.
5. I feel relaxed when listening to new ideas.
6. I would rather not have to listen to other people at all.
7. I am generally over excited and rattled when others are speaking to me.
8. I often feel uncomfortable when listening to others.
9. My thoughts become confused and jumbled when reading important information.
10. I often have difficulty concentrating on what others are saying.
11. Receiving new information makes me feel restless.
12. Watching television makes me nervous.
13. When on a date I find myself tense and self-conscious when listening to my date.
14. I enjoy being a good listener.
15. I generally find it easy to concentrate on what is being said.
16. I seek out the opportunity to listen to new ideas.
17. I have difficulty concentrating on instructions others give me.
18. It is hard to listen or concentrate on what other people are saying unless I know them well.

19. I feel tense when listening as a member of a social gathering.

20. Television programs that attempt to change my mind about something make me nervous.

PERSONAL REPORT OF COMMUNICATION APPREHENSION (PRCA)

This instrument is composed of 20 statements concerning feelings about communicating with other people. Indicate the degree to which the statements apply to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree with each statement. Work quickly, just record your first impression.

1. While participating in a conversation with a new acquaintance I feel very nervous.

2. I have no fear of facing an audience.

3. I look forward to expressing my opinion at meetings.

4. I look forward to an opportunity to speak in public.

5. I find the prospect of speaking mildly pleasant.

6. When communicating, my posture feels strained and unnatural.

7. I am tense and nervous while participating in group discussions.

8. Although I talk fluently with friends I am at a loss for words on the platform.

9. My hands tremble when I try to handle objects on the platform.

10. I always avoid speaking in public if possible.

11. I feel that I am more fluent when talking to people than most other people are.

12. I am fearful and tense all the while I am speaking before a group of people.

13. My thoughts become confused and jumbled when I speak before an audience.

14. Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.

15. Conversing with people who hold positions of authority causes me to be fearful and tense.

16. I dislike to use my body and voice expressively.

17. I feel relaxed and comfortable while speaking.

18. I feel self-conscious when I am called upon to answer a question or give an opinion in class.

19. I face the prospect of making a speech with complete confidence.

20. I would enjoy presenting a speech on a local television show.